

Amendments of the Claims:

A detailed listing of all claims in the application is presented below. This listing of claims will replace all prior versions, and listings, of claims in the application. All claims being currently amended are submitted with markings to indicate the changes that have been made relative to immediate prior version of the claims. The changes in any amended claim are being shown by ~~strike through~~ (for deleted matter) or underlined (for added matter).

1-6. (Cancelled)

7. (Currently amended): A system to treat diseases based on biological activities, comprising:

a) at least one biological activity sensing means which senses biological activity information issued by biological activities, and outputs a plurality of input biosignals;

b) a calculating means which receives the input biosignals, calculates a plurality of stimulation signals for stimulation of an organism using a convolution integral between at least one impulse response previously obtained from normal biological activities and the input biosignals, and outputs the stimulation signals for stimulation of the organism;

wherein the impulse response is calculated from an inverse Fourier transform of a transfer function which is based on a Fourier transform of ~~the~~ normal-activity biosignals from the normal biological activities; and

c) an organism stimulating means which receives the stimulation signals ~~for stimulation of the organism~~, and stimulates the organism based on ~~these~~ the stimulation signals.

8. (Previously presented): The system of claim 7, wherein the biological activity sensing means is selected from the group consisting of electrodes and pressure sensors.

9. (Currently amended): The system of claim 7, wherein the ~~biosignals are~~ biological activity sensing means senses biological activity information selected from the group consisting

of sympathetic nerve activities, parasympathetic nerve activities, blood flow, blood pressure, body temperature, electrocardiogram, electroencephalogram, and various biochemical markers.

10. (Currently amended): The system of claim 7, wherein the organism stimulating means is stimulates in a manner selected from the group consisting of electrical stimulation; and stimulation with the use of devices for drug administration.

11. (Currently amended): The system of claim 7, wherein the calculating means comprises:

at least one amplifier to amplify the input biosignals;

at least one analog-to-digital converter, to convert the input biosignals from an analog signals to a digital signals; and

at least one analyzer ~~to process data~~ to calculate stimulation signals to be transferred to the organism stimulating means.

12. (Currently amended): A system to treat diseases based on biological activities, comprising:

a) at least one biological activity sensing means which senses biological activity information issued by biological activities, and outputs a plurality of input biosignals;

b) a calculating means which receives the input biosignals, calculates a plurality of stimulation signals for stimulation of an organism using a convolution integral between an impulse response previously obtained from normal biological activities and the input biosignals, and outputs the stimulation signals for stimulation of the organism;

wherein the impulse response is calculated from an inverse Fourier transform of a transfer function which is based on a Fourier transform of ~~the~~ normal-activity biosignals from the normal biological activities; and

c) an organism stimulating means which receives the stimulation signals ~~for stimulation of the organism~~ calculated by the calculating means, and stimulates the organism based on ~~these~~ the stimulation signals;

wherein the calculating means includes discriminating means which determine whether the input biosignals are caused by normal biological activities or by abnormal biological activities;

wherein the calculating means does not output the stimulation signals ~~for stimulation of the organism~~ when the input biosignals are determined to be caused by normal biological activities; and

wherein the calculating means outputs the stimulation signals ~~for stimulation of the organism~~ when the input biosignals are determined to be caused by abnormal biological activities.

13-18. (Cancelled)